

REMARKS/ARGUMENTS

Applicants further responds herein to the Office Action dated June 29, 2007.

The inventions according to claims 1, 10, 19, and 29 (hereinafter referred to as "present invention") are based on not having the internal diameter of a guide part on the substrate holding part side becoming smaller than a guide part on the further side (from the substrate holding part), with:

(1) a plurality of guards are arranged coaxially outwardly from the substrate holding part side;

(2) a guide part and a processing liquid passage are formed by adjacent guards of these plurality of guards; and

(3) a processing liquid passage is inserted into a corresponding "recovery tank" by lifting movement of adjacent guards by a lifting part.

In the corresponding cases, as shown in Fig. 7 of JP11-87294, each of a guide part 30 on a spin chuck 1 (a substrate holding part) side (hereinafter, this guide part is also referred to as "first guide part") and a guide part 30 adjacent to the first guide part and provided further from the spin chuck 1 (hereinafter, this guide part is also referred to as "second guide part") has (a) inclined parts 31a and 31b, and (b) two vertical parts extending vertically downwardly from corresponding 31a and 31b.

In other words, "two vertical parts", a vertical part 33 on the spin chuck 1 side and a vertical part 34a arranged outside the vertical part 33, are provided vertically from an inclined part 31a in Fig. 7. Further, "two vertical parts", a vertical part (without a reference number) on the spin chuck 1 side and a vertical part 34b arranged outside the vertical part (without a reference number), are provided vertically from an inclined part 31b in Fig. 7, similarly as an inclined part 31a. Furthermore, a vertical part 34a of the first guide part and a vertical part (without a reference number) of the second guide part are inserted into a corresponding discharged liquid tank 24b by lifting movement.

Thus, in the invention described in Fig. 7 of JP11-87294, a space surrounded by an inclined part 31a of the first guide part, an inclined part 31b of the second guide part, and a vertical part (without a reference number) of the second guide part corresponds to a guide part of

the present invention; and a space surrounded by a vertical part 34a of the first guide part and a vertical part (without a reference number) of the second guide part corresponds to a processing liquid passage of the present invention, respectively. Moreover, since the invention described in Fig. 7 of JP 11-87294 forms a processing liquid passage by an adjacent guide part 30, it requires that each guide part 30 has two vertical parts.

However, the invention described in Fig. 7 of JP 11-87294 has the following problems because of employing components in this manner, that is, when forming “a part corresponding to a guide part of the present invention” (hereinafter also referred to as “guide part corresponding part”) by inclined parts 31a and 31b of adjacent first and second guide parts, and “a vertical part 34b” of the second guide part, an internal diameter of the guide part corresponding part is smaller than when forming the guide part corresponding part by inclined parts 31a and 31b of first and second guide part, and “a vertical part 33a” of the second guide part. This tendency is more pronounced for a guide part corresponding part on the spin chuck 1 side.

As a result, a guide part corresponding part on the spin chuck 1 side causes a problem that a processing liquid spattering from a substrate bounces and attaches on the substrate again.

In contrast, the present invention has the above-mentioned features (1) - (3) with the following characteristics of each of the guards except for the outermost guard from the substrate holding part:

- (a) a first cylindrical part (52b) arranged coaxially with a substrate holding part;
- (b) a projected part (52a) projecting obliquely upwardly toward the substrate holding part from the upper end of the first cylindrical part;
- (c) an inclined part (52c) extending obliquely downwardly toward said substrate holding part from the lower end of said first cylindrical part;
- (d) a second cylindrical part (52d) extending vertically downwardly from the lower end of said inclined part; and
- (e) a third cylindrical part (52e) extending vertically downwardly from the lower end of said inclined part and provided on the outer side of the second cylindrical part from the substrate holding part, and

is characterized in that a partition member outside a recovery tank into which a processing liquid passage corresponding to lowermost second processing liquid guide part is

inserted, is arranged in a slidably engage location in a drain between said second cylindrical part and said third cylindrical part.

As a result, the distance from the substrate holding part to the inner part of the guide part (i.e., a first cylindrical part of an outer guard) is set greater than the distance from the substrate holding part to the third cylindrical part of an outer guard. Accordingly, the present invention structurally produces an advantageous effect that even a guide part on the substrate holding part side can ensure a sufficient space between the substrate holding part to the inner side of the guide part to suppress the bounce of the processing liquid spattering from the substrate at the guide part.

Thus, the essence of the present invention is that a second cylindrical part of each of the guards extends vertically downwardly from an inclined part, not from a projected part, when each of the guards has second and third cylindrical parts, because a processing liquid passage inserted into a recovery tank is formed.

However, JP11-87294 neither discloses nor suggests the characteristics of the present invention. Furthermore, Sumnitsch and Shinbara fail to disclose connecting a processing liquid passage to a corresponding discharged liquid passage.

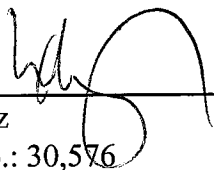
Accordingly, a person who has ordinary skill in the art would not be able to derive the inventions according to independent claims 1, 10, 19, and 28, and claims dependent thereon, from the cited references.

For the foregoing reasons and those in the original response, the applicant respectfully requests that the Examiner kindly reconsider the application and withdraw the outstanding rejections based on anticipation and obviousness.

Respectfully submitted,

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
TRADEMARK OFFICE EFS FILING
SYSTEM ON October 26, 2007.

MM:kc



Max Moskowitz
Registration No.: 30,576
OSTROLENK, FABER, GERB & SOFFEN, LLP
1180 Avenue of the Americas
New York, New York 10036-8403
Telephone: (212) 382-0700